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ABSTRACT

Integrating the use of technology-based library resources into the curriculum is necessary for students to acquire vital information-seeking skills. Learning to select and use electronic information sources found on CD-ROM, mainframe computers, and via the Internet enables students to function better in today's information society. This paper explores ways to integrate electronic information resources into course assignments and looks at how electronic sources affect the planning of library instruction and instructional content. The active learning environment created by the use of Austin Peay State University's Library Instruction and Computer Room, equipped with a video networking system and 24 PCs, is addressed. The paper discusses the experiences of students in the Heritage Writing and Speaking course, an interdisciplinary course in which students write papers and learn research skills, including the library's online catalog, InfoTrac's Expanded Academic Index, an index to periodical articles, and World Wide Web searching skills using Netscape. Ways in which students can incorporate electronic information resources into their assignments and a proposed "Pre-Scholar's Workstation" with undergraduate level resources for multiple disciplines and tools to manipulate the electronic information, are also discussed. (Author/SWC)

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INTEGRATING ELECTRONIC INFORMATION SOURCES INTO THE CURRICULUM

ED 400 811

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Abstract

Integrating the use of technology-based library resources into the curriculum is necessary for students to acquire vital information-seeking skills. Learning to select and use electronic information sources found on CD-ROM, mainframe computers and via the Internet enables students to function better in today's information society. This presentation explores ways to integrate the use of electronic information resources available inside and outside libraries into course assignments. Use of the video networking system and 24 PCS in APSU's new Library Instruction and Computer Room to create an active learning environment is addressed. Experiences with the Heritage-Writing, Speaking and Researching Across-the-Curriculum course at Austin Peay State University are included. Electronic information resources covered in the Heritage course are Felix G. Cat, APSU's new Windows-based, client/server online catalog, InfoTrac's Expanded Academic Index, an index to periodical articles, and Internet tools such as World Wide Web. Ways in which students can incorporate electronic information resources into their use of WordPerfect and other applications to write papers, create annotated bibliographies and complete other assignments are discussed.

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Overview

New electronic information sources found on CD-ROM, mainframe computers and via the Internet are beginning to take up residence in all libraries. We are working with our faculty at Austin Peay State University to integrate these sources into course assignments. We consider the future to be very exciting as we teach students how to include electronic sources in their projects through multi-tasking. Two particular concerns for us are balancing coverage between print and electronic sources and helping students understand that not *all* information is available via computers. Our presentation today includes some of our ideas about the dynamics of library instruction in an electronic environment, as well as some of the active learning experiences we include in the Heritage-Writing, Speaking and Researching Across-the-Curriculum courses which we team-teach.

Integrating Electronic Information Sources into Course Assignments

Is preparation for library instruction any different in an electronic environment? Does technology change instructional content? These are questions we want to explore. DeAnna Nipp (1991) argues that the basic research process is not changed by the presence of electronic sources. "The need for a basic understanding of the library....remains the same" and users need to place an electronic source "in the context

of the process of which it is a part" (p. 42). Taking this a step further, Cerise Oberman (1995) states that "... librarians cannot allow technology to be the sole engine driving or defining their instructional efforts" (p. 36). She does, however, believe there is a need for librarians to "unmask technology" for users by planning instruction so that students learn "what technology can and, more importantly, cannot provide them" (p. 39). Let's look at planning library instruction, as well as instructional content, to see how electronic sources influence instruction.

Planning Library Instruction

Since most library user education directly relates to a specific class assignment, I begin planning library instruction by talking to faculty about assignments. There are certain questions that need to be asked every time. What type of library-related work are students assigned? How many information sources are students required to cite in their work? Are students allowed to use books and popular magazines, or must they use scholarly journals? When is the assignment due? Once I know the assignment, I can select sources I think will help students identify the information they need.

In selecting sources, both electronic and print are considered. What drives the selection? Is it expensive technology which is new and exciting? Is it the desire to use familiar print sources? Our selection should be based on which sources provide the information needed at the appropriate level of the user.

Once I select the sources to cover, I plan the session to include time for hands-on work, which becomes even more important with electronic sources. Hands-on work allows students to learn by practice and allows us to help who experience problems. Although we cover fewer sources in less detail, we believe providing hands-on time empowers the students and encourages them to take responsibility for their own learning. We also provide additional individual one-on-one instruction at the library's reference desk at the time the specific information need occurs. Next, let's look at preparing instructional content.

Instructional Content

It has always been a challenge to decide what content to cover in the short time usually available for library instruction, and we are finding it is an even greater challenge when both electronic and print sources are involved. Traditionally, we have taught search strategy and the mechanics of using print sources. To that we now add the mechanics of using electronic sources. Which keys on the keyboard are used to accomplish what task? When is the mouse used? How is the information printed and/or downloaded? We must address all these questions to some degree.

Teaching mechanics can easily fill the entire time, but we really need to continue to teach students how to determine what types of information sources provide the information they seek and how to develop a search strategy. Students must learn to ask

certain questions. Do I need current information found in popular magazines or journal articles? Is the information I need a simple fact found in an encyclopedia? Students then need to learn to formulate a search strategy based on the sources that will either provide the information or lead them to it. During this process, they must ask what is it that specific sources cover. What subject area is covered by the source? What periodicals are indexed? Are the periodicals scholarly and/or popular? What is the range of years that is included? They must also learn to cope with logistical considerations, such as which materials are held locally, which are available immediately via the computer or obtainable from other locations.

Besides learning how to use specific sources and formulating search strategy, students must learn when to approach a librarian. As we all know, sometimes students need help evaluating their search strategies and finding additional sources to consult. Finally, students must learn to evaluate materials to see if they are useful to the project at hand. We can teach them some evaluation techniques, such as noting the currency of the information, the author's credentials, the author's purpose and any bias on the part of the author. We can provide students with opportunities to learn how to be smart consumers of information by providing an active learning environment.

Active learning in an electronic classroom

Where electronic sources are taught is very important for the success of the instruction. In September 1994, APSU's Woodward Library opened a room called the Library Instruction and Computer Room (LICR). Funded with Information Technology monies generated by student fees, the LICR contains 23 student computer workstations and one instructor workstation, plus instructional equipment including an LCD projector and a video networking system. When the LICR is not used for formal library instruction sessions, the room serves as a computer lab for APSU students to write papers and other written assignments, check their e-mail, surf the Internet, and sometimes, they even use traditional library information sources.

The video networking system networks students' and instructor's workstations together and allows us to control the student workstations. We are able to transmit images from our workstation to all or selected workstations while freezing the students' keyboards and mice. Images from student workstations can also be received on our workstation and projected via the LCD projector to a projection screen.

We use this equipment to support active learning experiences for students. Sometimes we use the video networking system to demonstrate electronic sources for part of the session, followed by hands-on work by the students. We assist students as they work on their own. A variation is to have students tell us each step to take as we

demonstrate a source. The LICR facilities aid us in giving students the chance to take an active role in learning about various information sources available inside and outside the library. The library instruction integrated into APSU's Heritage Program characterizes some of the efforts we are making to integrate electronic sources into the curriculum through active learning experiences.

Heritage Experiences with Felix, InfoTrac, the World Wide Web and Gopher

Our involvement in the seven-year old Heritage Program gives us the opportunity to conduct several library instruction sessions with the same students over the course of two semesters. Not being confined to a one-shot hour long session allows us to integrate use of the library into these courses and to try different active learning experiences with the same students. These efforts enrich our library instruction program as we work to merge instruction about electronic sources with the more traditional library instruction that we conduct.

What is Heritage?

Heritage is an interdisciplinary course involving the humanities, sciences, social sciences and the fine arts, which most other schools call "writing-across-the-curriculum." Students can earn up to 24 semester hours if they follow the program for the two years it is offered. The portion discussed here is Heritage-Writing and

Speaking, otherwise known as Heritage 1010 and 1020. The Austin Peay State University 1995-97 Undergraduate Bulletin describes Heritage 1010 as providing "intensive training in writing across the curriculum, in library research, and the principles of oral communication. Emphasis is on gathering information, evaluating sources, and presenting ideas forcefully in both writing and public speaking" (p. 237). Heritage 1020 is described as "a continuation of 1010, with emphasis on writing about literature and the fine arts" (p. 237).

Who is involved?

The students in Heritage are usually freshmen. It is not an Honors program. Any student is eligible to take it, unless they need to take Developmental English.

The courses are team-taught by professors from the Languages and Literature Department, the Department of Speech, Communication and Theatre, and the Library. There are usually three or four sections of Heritage 1010 and 1020, each with its own coordinating instructor from the Languages and Literature Department and its own librarian. One or two instructors from Speech share the responsibilities for the "oral communication" portions.

What is covered in Heritage?

Heritage 1010 is taught in the Fall semester. It is here that students really experience writing-across-the-curriculum as they read, hear lectures, research, speak

and write on topics in history and the natural and social sciences. In the spring, Heritage 1020 gives them the opportunity to study literature. They learn to find and write literary criticism and theater reviews.

What sources are taught?

The first source which students learn is InfoTrac, a periodical index which covers more than 1400 magazines and journals. We subscribe to the Expanded Academic Index ASAP, and the backfile which dates to 1980; and the Business Index ASAP with its backfile dating to 1983. The students are given a worksheet which not only teaches them "which buttons to push," but how to develop a search statement.

Our automated catalog, Felix G. Cat, is the next source that they learn. Felix is the Ameritech Horizon product modified to meet the needs of our library's users. The database contains more than 200,000 items included in the reference and general book collections, videotapes, music CDs, juvenile collection, and Special Collections. The students are taught the various ways of searching the catalog and learn which kind of search to choose depending on what information they have. Since printing a bibliography involves many steps, the students are given directions on how to produce a sorted list.

The World Wide Web offers a variety of resources for all kinds of interests. The students are shown Netscape, our graphical web browser, and given URLs relevant to

specific disciplines. Yahoo and OpenText are also presented so that they can locate other sites of interest. They may access history sites, authors' home pages, or locate bibliographies for an author whom they are studying. Also presented are the print Internet search guides which they may use to obtain the addresses for other sources.

The Austin Peay State University Gopher offers them the opportunity to search the online catalogs at various area libraries. The students enjoy this as sometimes a friend enrolled at one of these universities can go to his or her library and check a book out for the APSU student. They can often deliver it faster than Interlibrary Loan can obtain it. Another item on the gopher is LC Marvel, the catalog of the Library of Congress. Students can browse its comprehensive holdings and identify an item to request through Interlibrary Loan.

These are the specific sources about which we want the Heritage students to learn. We hope they realize that they have only learned a very small number of resources and that many more are available both here at the Library and in cyberspace. Once the window of opportunity is open to them to use the Internet and the Web, we hope that they will discover other useful sources and share them with us.

Incorporating Electronic Sources into Student Projects

There are many technical, conceptual, and instructional issues involved in trying to integrate electronic sources into the curriculum. Providing the equipment, software and knowledge needed to accomplish this is a major part of this process. The APSU library is addressing these issues by envisioning an ideal for the future and working toward it.

The "Pre-scholar's Workstation"

In order to take advantage of the new possibilities unveiled by technology, the APSU library plans to provide a "Pre-scholar's Workstation" for our patrons. Unlike a "Scholar's Workstation," which contains specialized information resources for one discipline on a single workstation, our workstation will contain general interest, undergraduate level resources for many different disciplines and tools to manipulate the information. Undergraduate students can get the same benefits from one-stop shopping as scholars: time savings, less confusion about available resources, and reduced paper usage. Because these stations will have many applications and resources on them, students will be able to download or copy quotes and bibliographies directly into papers. They can also use graphics and other multimedia elements for other types of projects. Key to students' use of these capabilities is the cooperation of the faculty. Encouraging or requiring students to use some electronic sources in assignments is

often the only factor motivating students to learn and use the resources. Faculty can integrate electronic resources into traditional assignments, such as requiring at least one Internet source for a research paper. A more ambitious student project is to download graphics and information from companies' home pages for brochures created for a technical writing class.

The Project

Creating a complete Pre-scholar's Workstation will require additional resources and reconfiguration of those already present on library and campus computers. The workstations in APSU's Library Instruction and Computer Room are currently close to the ideal, since they have the online catalog, InfoTrac databases, SilverPlatter CD-ROMs, word processors and Internet access available, including open web access through Netscape. For security reasons, our "InfoStations" (reference area computers) do not have word processors or Internet access available. With new security programs, we hope to make limited versions of these resources available soon. Some of these services are already accessible in other offices and labs on campus with expansion to the rest of the campus planned. We also need to add more resources such as FirstSearch and web-based computer-assisted instruction programs to all machines. Ideally, we want to use a web page as our initial menu screen, and to use web interfaces for our different services to give them more uniformity. As we move toward

the ideal Pre-scholar's Workstation, we must also work to familiarize students and faculty with what is available on the workstations, and teach basic multi-tasking skills such as copying, pasting, and downloading information.

Concerns

Although we believe integrating electronic resources into the curriculum is needed and is beneficial to our patrons, there are some concerns involved as well. The first is the danger of creating "computer blinders," in which students ignore any resources that are not computerized. An important point we emphasize in our instructional program is choosing the most appropriate resource, whether it be paper-based or electronic, for the patron's needs. Stressing the need for evaluation of information authority and reliability is also important in instruction. These issues have always been a concern for librarians, but the advent of the Internet as an information resource increases their importance.

Another concern is the ease with which electronic information can be plagiarized. While the Pre-scholar's Workstation does make it easier to copy information and call it your own, it also makes it easier for faculty to check these resources to confirm suspected plagiarism. The last concern I will discuss here is the problem of citing electronic resources. Although this is currently an area of much

confusion, several different style guides have now appeared that can easily be used. Certainly time will consolidate these styles into a few standard guides, such as now exist for citing traditional resources.

Conclusion

We believe integrating electronic resources into the curriculum and encouraging the use of new applications such as Netscape benefit students and the campus as a whole. Not only does it get them the information that they need, but it also forces them to become more technologically sophisticated. Their new knowledge and skills will help them not only in their personal lives, but also in the workplace.

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